



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,032	05/22/2000	ALFRED HAUENSTEIN	POO.0579	3783

29177 7590 07/01/2005

BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

CHAWAN, VIJAY B

ART UNIT PAPER NUMBER

2654

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,032

Applicant(s)

HAUENSTEIN, ALFRED

Examiner

Vijay B. Chawan

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al., (4,401,851) in view of Matsumoto (5,848,390).

As per claim 1, Nitta et al., teach the method for voice recognition, in which spoken language is recognized using a voice recognition system, comprising the steps of:

running the voice recognition system on the computer (Col.1, lines 44-48).

Nitta et al., while teaching running voice recognition system on a computer, do not specifically teach determining a performance index of the computer by a program for computer program assessment, automatically specifying an input quantity for the voice recognition system using the performance index, and, automatically adjusting accuracy of the voice recognition system to an obtained computing power of the computer using the input quantity. Matsumoto does teach determining a performance index of the computer by a program for computer program assessment, automatically specifying an input quantity for the voice recognition system using the performance index, and,

Art Unit: 2654

automatically adjusting accuracy of the voice recognition system to an obtained computing power of the computer using the input quantity (Col.6, lines 49-54, 61-67, Col.7, lines 1-8, 15-20, Col.8, lines 16-21, Col.2, lines 19-28: Matsumoto changes the CPU performance based on the sampling frequency of the input data in a speech synthesis system). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to apply the technique of Matsumoto in the method of Nitta et al., because an artisan would realize that using the Matsumoto reference to teach the concept of adjusting speech data to match the CPU performance, and that adjusting the speech recognition data of Nitta would advantageously allow for the hardware system to operate the speech recognition software without forcing the user to switch hardware systems (Matsumoto, col. 2 line 29-40).

As per claim 2, Nitta et al., in view of Matsumoto teaches the method of claim 1, further comprising the step of determining values for system parameters of the voice recognition system in that the values are computed from an input quantity in accordance with a mapping specification (Matsumoto teaches mapping to link different running times of the computer to the various sampling frequencies of number of quantization bits). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to apply the technique of Matsumoto in the method of Nitta et al., because an artisan with ordinary skill in the art at the time of invention would readily realize that this would greatly increase the accuracy of the system performance.

Art Unit: 2654

As per claim 3, Nitta et al., in view of Matsumoto teaches the method of claim 2, further comprising the step of converting the mapping specification using a table (Matsumoto: Col.7, lines 15-20, Col.8, lines 16-21).

As per claim 4, Nitta et al., in view of Matsumoto teaches the method of claim 1, further comprising the step of executing a setting process during operation of the voice recognition system (Matsumoto: Col.3, lines 37-39).

As per claim 5, Nitta et al., in view of Matsumoto teaches the method of claim 1, wherein the accuracy adjusting step of the voice recognition system includes adjustment by at least one of the following system parameters - pruning threshold, histogram pruning, acoustic look ahead, language model look ahead, threshold for selecting distance parameters that are to be computed (Matsumoto: Col.6, lines 49-54, 61-67, Col.7, lines 1-8, 15-20, Col.8, lines 16-21, Col.2, lines 19-28: Matsumoto adjusts the CPU performance and accuracy based on the sampling frequency of the input data in a speech synthesis system).

As per claim 6, Nitta et al., in view of Matsumoto teaches the method of claim 5, further comprising the step of specifying at least one of the system parameters using the input quantity (Matsumoto: Col.5, lines 1-10, 44-65).

As per claim 7, Nitta et al., in view of Matsumoto teaches the method of claim 6, further comprising the step of weighing the system parameters with respect to their influence on a respective target quantity (Matsumoto: Col.5, lines 1-10, 44-65).

As per claim 8, Nitta et al., in view of Matsumoto teaches the method of claim 7, wherein the target quantity is at least one of the following quantities – accuracy of the

Art Unit: 2654

voice recognition system, and, speed of the voice recognition system (Matsumoto: Col.5, lines 1-10, 44-65).

As per claim 9, Nitta et al., in view of Matsumoto teaches the method of claim 7, further comprising the step of weighting the system parameters equally (Matsumoto: Col.5, lines 1-35).

As per claim 10, Nitta et al., in view of Matsumoto teaches the method claim 7, further comprising the step of weighting the system parameters according to a prescribed weighting table (Matsumoto: Col.5, lines 1-35).

Claim 12 is an apparatus claim implementing the method of claim 1, and is similar in scope and content and is rejected under similar rationale

Response to Arguments

3. Applicant's arguments filed March 25, 2005 have been fully considered but they are not persuasive.

As per applicant's arguments on page 5 of the response that Matsumoto teaches a method of speech synthesis and that the claimed invention pertains to speech recognition, examiner argues 1) that the Nitta reference is used in the rejection to teach speech recognition aspect of the claim language, 2) that the Matsumoto reference is used to teach the concept of adjusting speech data to match the CPU performance, and that 3) the combination of Nitta in view of Matsumoto teaches the changing of speech data, in a speech recognition system, to match CPU performance.

Art Unit: 2654

As per applicants' arguments on page 6 of the response that Matsumoto alters the CPU performance to match the voice recognition system, examiner disagrees and notes that in one embodiment of Matsumoto (in particular, the already referenced col. 7), the amount of speech data is adjusted, and not the CPU (col. 7 lines 27-47).

Examiner notes that on page 3, lines 5-7 of the office action, the phrase "Matsumoto changes the CPU performance based on the sampling frequency of the input data in a speech synthesis system" means that Matsumoto improves upon the performance of the system by monitoring CPU performance and adjusting the sampling of the input data accordingly (as noted in the reference to col. 8 lines 16-21). Applicant may be misdirected by Matsumoto's use of the term "changing of the sampling frequency of the speech data". Matsumoto is not teaching, in this embodiment, changing of the sampling rate of the hardware, but is determining how many samples to take out of the speech data (also known as 'downsampling' -- his speech data is already sampled at 48 kHz, and based on the determination of the CPU, downsamples the speech data → in this instance, Matsumoto teaches an example of downsampling to 16kHz).

As per applicant's arguments on pages 6-7 of the response that proper motivation was not given to combine Nitta and Matsumoto, examiner disagrees and notes that Matsumoto does indeed teach the motivation to combine (the accuracy of the system is improved when the speech data is adjusted to the computing power → an overtaxed CPU leads to an inaccurate representation of the speech data, or else forces the user to change the CPU power with the software requirements, which is burdensome and costly to the user → Matsumoto, col. 2 line 29-40).

As per applicant's arguments on page 7 of the combinability of the references, examiner argues that the Matsumoto reference is used to teach the concept of adjusting speech data to match the CPU performance, and that adjusting the speech recognition data of Nitta would advantageously allow for the hardware system to operate the speech recognition software without forcing the user to switch hardware systems (Matsumoto, col. 2 line 29-40).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

Art Unit: 2654

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vijay B. Chawan
Primary Examiner
Art Unit 2654

vbc
6/25/05